



# GREYSTONE ENERGYSYSTEMS INC

## ROOM TEMPERATURE SENSOR TSRC Series

The TSRC series is an attractive, low profile enclosure that incorporates a precision temperature sensor used to monitor room temperatures. Additional options are available that include setpoint adjustment, manual override, fan speed and LCD



### SPECIFICATION:

Sensing Element.....Various thermistors and RTDs  
 Sensor Accuracy.....Thermistors:  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.36^{\circ}\text{F}$ ),  
 0 to  $70^{\circ}\text{C}$  (32 to  $158^{\circ}\text{F}$ )  
 Platinum RTD's:  $\pm 0.3^{\circ}\text{C}$  ( $\pm 0.54^{\circ}\text{F}$ )  
 @  $0^{\circ}\text{C}$  ( $32^{\circ}\text{F}$ )  
 Nickel RTD's:  $\pm 0.4^{\circ}\text{C}$  ( $\pm 0.72^{\circ}\text{F}$ )  
 @  $0^{\circ}\text{C}$  ( $32^{\circ}\text{F}$ )  
 Operating Conditions..... $0-50^{\circ}\text{C}$  ( $32-122^{\circ}\text{F}$ ),  
 0-95 %RH non-condensing  
 Wiring Connections.....Screw terminal block (14 to 22 AWG)  
 Sensor only - Pigtail, 2 or 3 wire  
 Enclosure.....Wall mount enclosure,  
 White ABS - IP30 (NEMA 1)  
 84 w x 119 h x 29 d mm (3.3" x 4.7" x 1.15")

### OPTIONS:

#### Override Switch

Switch Type.....Front panel, momentary pushbutton,  
 N.O., SPST, 50 mA @12 Vdc

#### Fan Speed Switch

Range.....O, Auto, Low, Medium, High  
 Signal.....Resistance: 0, 2, 4, 6 and 8 K $\Omega$   
 standard (Custom ranges available)

#### Setpoint Slide Pot

Range.....Front panel pot as resistive output,  
 0-10 K $\Omega$  standard  
 Custom spans available.....1K, 2K, 5K, 10K or 20K  $\Omega$

#### Occupied Input

Signal Type.....Digital input, 0/5 Vdc standard, active low  
 Action.....Causes "OCC" segment to light on LCD

#### LED Input

Signal Type.....Active high, low or 2-wire,  
 5 V current limit standard  
 LED Colors.....Red, Green or Yellow  
 Power Supply.....5 Vdc standard, 10 Vdc or 24 Vdc optional

#### LCD Display

Power Supply.....12-24 Vdc / 24 Vac  $\pm 10\%$   
 (non-isolated half-wave rectified)  
 Consumption @ 24 Vdc.....13 mA max (no backlight),  
 23 mA max (with backlight)  
 Protection Circuitry.....Reverse voltage protected  
 Range..... $0.0-35.0^{\circ}\text{C}$  or  $32.0-95.0^{\circ}\text{F}$   
 jumper selectable  
 Resolution..... $0.1^{\circ}\text{C}/^{\circ}\text{F}$   
 Display Size.....38.1 w x 16.5 h mm (1.5" x 0.65")  
 Digit Height.....11.43 mm (0.45")  
 Symbols..... $^{\circ}\text{C}$ ,  $^{\circ}\text{F}$ , OCC  
 Backlight.....Enable or disable via jumper

### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
TSRC	Room Temperature Sensor

CODE	Sensor
2	100 $\Omega$ Platinum, IEC 751, 385 Alpha, thin lm
5	1800 $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
6	3000 $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
7	10,000 $\Omega$ , type 3, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
8	2.252K $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
12	1000 $\Omega$ Platinum, IEC 751, 385 Alpha, thin lm
13	1000 $\Omega$ Nickel, Class B, DIN 43760
14	10,000 $\Omega$ , type 3, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ c/w 11K shunt resistor
20	20,000 $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
24	10,000 $\Omega$ , type 2, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$

CODE	Options (Multiple selections can be made)
P	0-10K linear slide pot for set point control
S	Exposed push button momentary switch - N.O.
C	3-digit LCD temperature indicator $^{\circ}\text{C}$ / $^{\circ}\text{F}$ selectable
F	Fan speed switch (Auto, O, Low, Mid, High)
Y	Yellow LED (n/a if C option selected)
R	Red LED (n/a if C option selected)
G	Green LED (n/a if C option selected)
E	External jack for remote system access (4-pin header)
GS	<b>Greystone Customized Version (TSRC*GS***)</b>

Greystone Energy Systems, Inc. reserves the right to make design modications without prior notice.

Due to the many possible congurations, special part numbers may be required. Please contact Greystone for more information

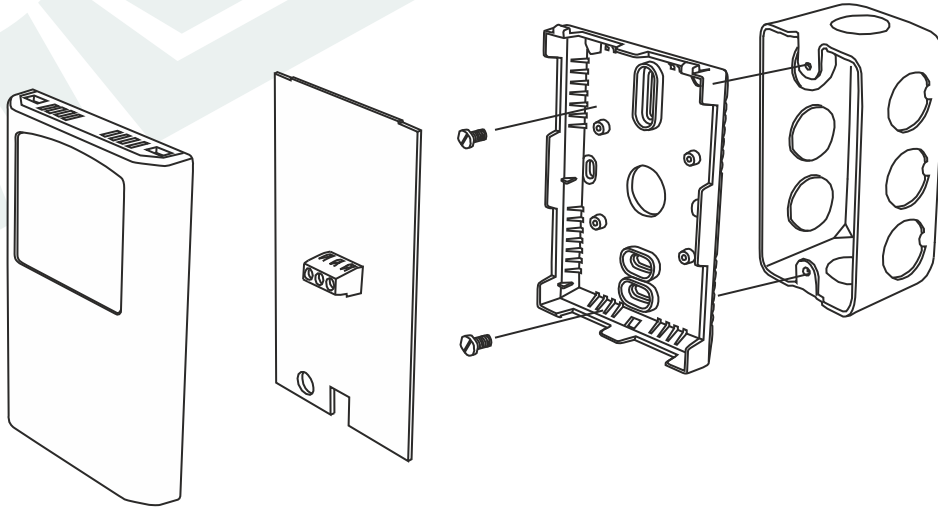
### TSRC\*GS\*\*\* Description:

## TYPICAL INSTALLATION:

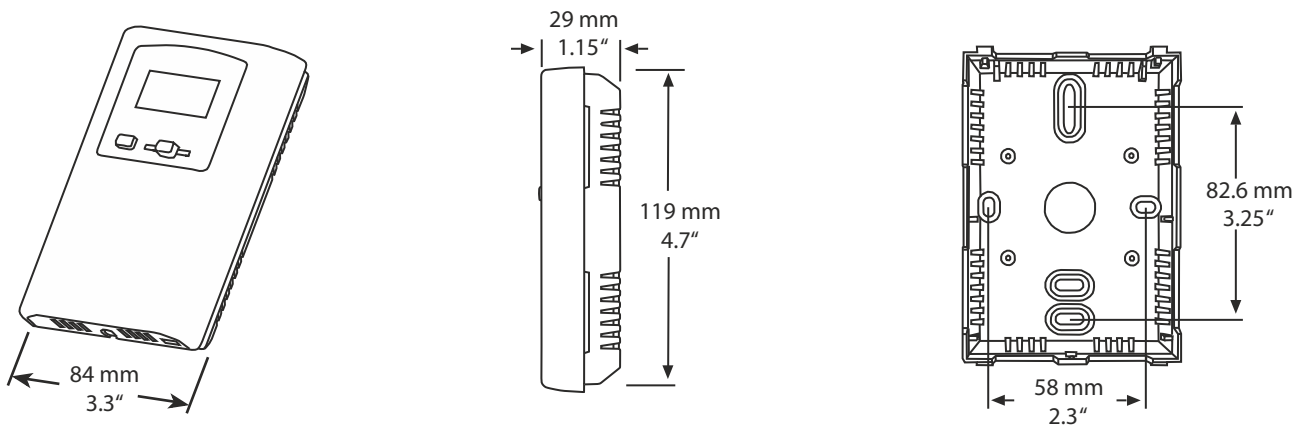
For complete installation and wiring details, please refer to the product installation instructions.

The TSRC series can be mounted directly to a single gang electrical box or directly to a wall. Insulating foam is adhered to the back of the enclosure to provide a thermal barrier from internal wall temperatures.

For sensor only models a 2 wire or 3 wire pigtail is used for connection to the Building Automation System. In models with options such as setpoint adjustment or manual override, a terminal block connection is provided.



## DIMENSIONS:



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